



Forecast Guidance for African Monsoon Multidisciplinary Analysis (AMMA)

West Africa and East Atlantic Synoptic Discussion

**AFRICA DESK
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1400 00 EDT September 14th, 2006

I SYNOPSIS (SEPTEMBER 14/0000UTC)

The Azores's High pushes a ridge (1016hPa) into Morocco at surface. The tropical heat low is indicated by 1007hPa over Chad. The St Helena's high pressure system indicated by 1029hPa is located at 32°S and 00.

- At 1200UTC the ITD is located at 19°N/16°W, 20°N/10°W, 21°N/00°, 17°N/10°E and 16°N/20°E.
- The METEOSAT imagery at 1200UTC shows deep convection associated with a squall line over Chad and CAR; shallow convection over Senegal, Gambia, Mauritania, Guinea Conakry, Sierra Leone, Mali, Nigeria and Cameroon; local convection over Niger, Ghana, Togo and Benin.
- The monsoon flow at 925hPa hPa covers all West Africa except northern Mauritania, northern Mali, northern Niger and northern Chad. Four vortices are located respectively over northern Mauritania, Senegal, southern Guinea Conakry, eastern Niger and eastern Chad.
- The monsoon flow at 850hPa reaches southern Mauritania, central Mali, northern Burkina Faso, northern Nigeria and central Chad. Three vortices located respectively at 12°N/31°W (southwestern Cape Verde Islands), over Guinea Conakry and over eastern Chad are noted.
- At 700hPa, the flow is easterly with a core value of 40kts over Burkina Faso. However, a low and trough are observed respectively at 12°N/31°W and over Cote d'Ivoire.
- At 500hPa, the flow is easterly with a core value of 25kts over Niger. A low is reported over Cote d'Ivoire.
- At 200hPa, the flow is easterly (05-40kts). However, it becomes southwesterly over northern Sahel. The maximum speed is observed over Nigeria.

II EVOLUTION for T+24, 48, 72 Hours

The ridge over Morocco will intensify at T+24 to T+72 and will extend over Algeria and Tunisia. The heat low will remain without significant change. The ITD will retreat southwards over Mauritania, Mali and Chad. It will shift slightly northward over Niger at T+48.

- At T+24: 19°N-16°W, 20°N-10°W, 19°N-17°, 17°N-10°E, 18°N-20°E.
- At T+48: 19°N-16°W, 18°N-10°W, 17°N-00°, 20°N-10°E, 18°N-20°E.
- At T+72: 18°N-16°W, 18°N-10°W, 18°N-00°, 18°N-10°E, 16°N-20°E.

At 850hPa:

- At T+24: Tropical storm Helen located over southwestern Cape Verde Islands at T+00 will move toward 14°N/42°W. The vortex located over Guinea Conakry will move toward Guinea Bissau and that reported over eastern Chad will move to eastern Niger. Two vortices will develop respectively over Chad and southeastern Nigeria.
- At T+48: The vortex reported over Guinea Bissau will move to coastal Senegal. The vortex centered over eastern Niger will move to northwestern Nigeria and that located over southeastern Nigeria will remain quasi-stationary.
- At T+72: The vortex reported over coastal Senegal will be positioned over eastern Cape Verde Islands. The vortex observed over northwestern Nigeria will move to central Mali. A vortex will develop over northern Cameroon.

III FORECAST

At T + 24:

- Deep convection with thunderstorms and rains will occur over Senegal, Gambia, Guinea Bissau, Guinea Conakry, Nigeria, Chad and Cameroon.
- Shallow convection with isolated thunderstorms will develop over southern Mauritania, western Mali, Sierra Leone, Liberia and CAR.
- Local convection with light rains will be expected over Cote d'Ivoire, Togo and Benin.

At T+48:

- Deep convection with thunderstorms and rains will affect Mauritania, Senegal, Gambia, Guinea Bissau, Nigeria, Cameroon and Chad.
- Shallow convection with isolated thunderstorms will develop over western Mali, eastern, Niger and CAR.
- Local convection with light rains will be expected over Sierra Leone Liberia, Cote d'Ivoire, Ghana, Togo and Benin.

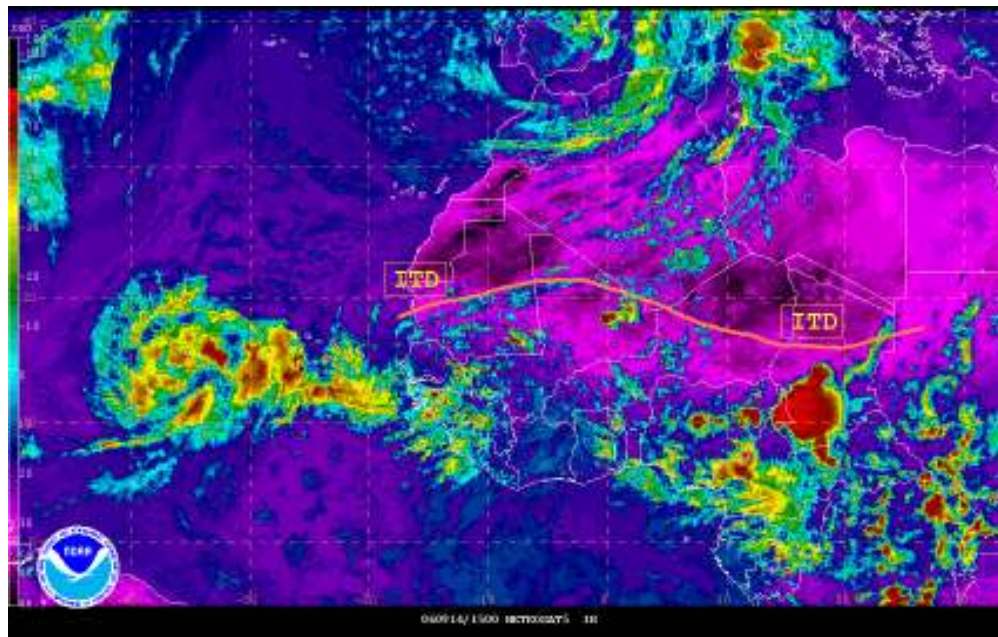
➤ **At T + 72:**

- Deep convection will affect Cape Verde Islands, Nigeria and Cameroon.
- Shallow convection with rains and thunderstorms will occur over Guinea Bissau, Guinea Conakry and Cote d'Ivoire.
- Local convection with rains will be expected over Niger and Burkina Faso.

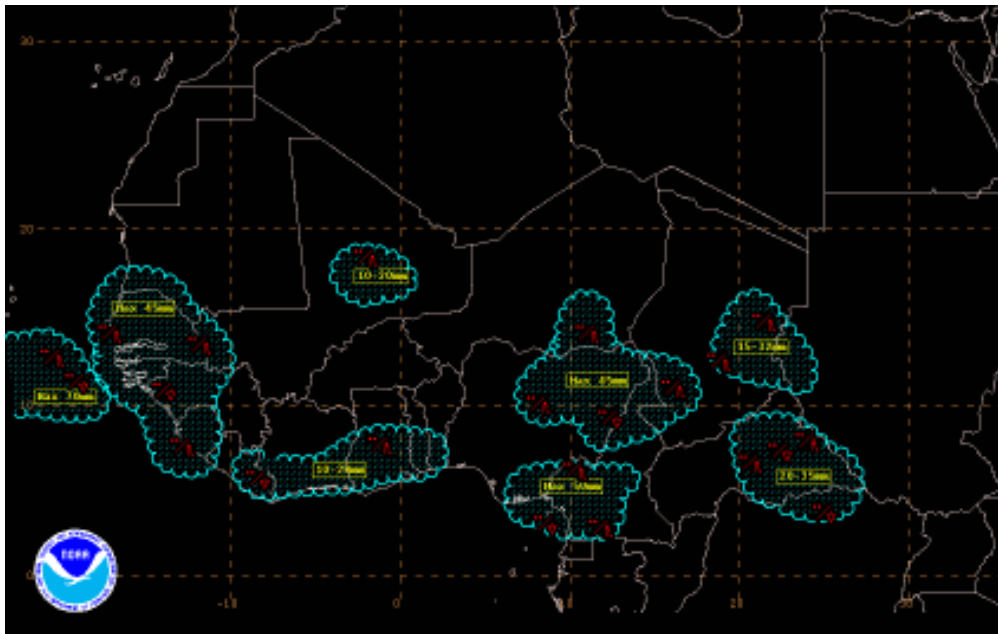
NOTE: Tropical storm Helene at 1500UTC is centered southwest of Cape Verde Islands near 13.7°N/34°7 W, moving west 17kt. For more information, visit www.nhc.noaa.gov

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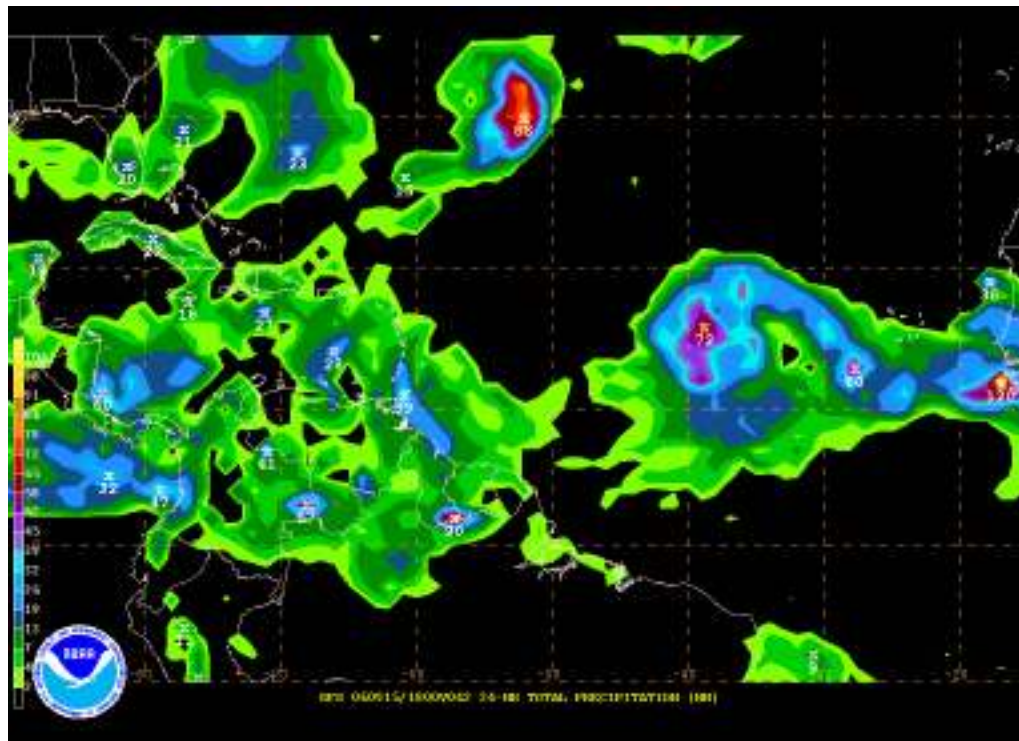
Position of the ITD for
September, 14th 2006 at 1200UTC



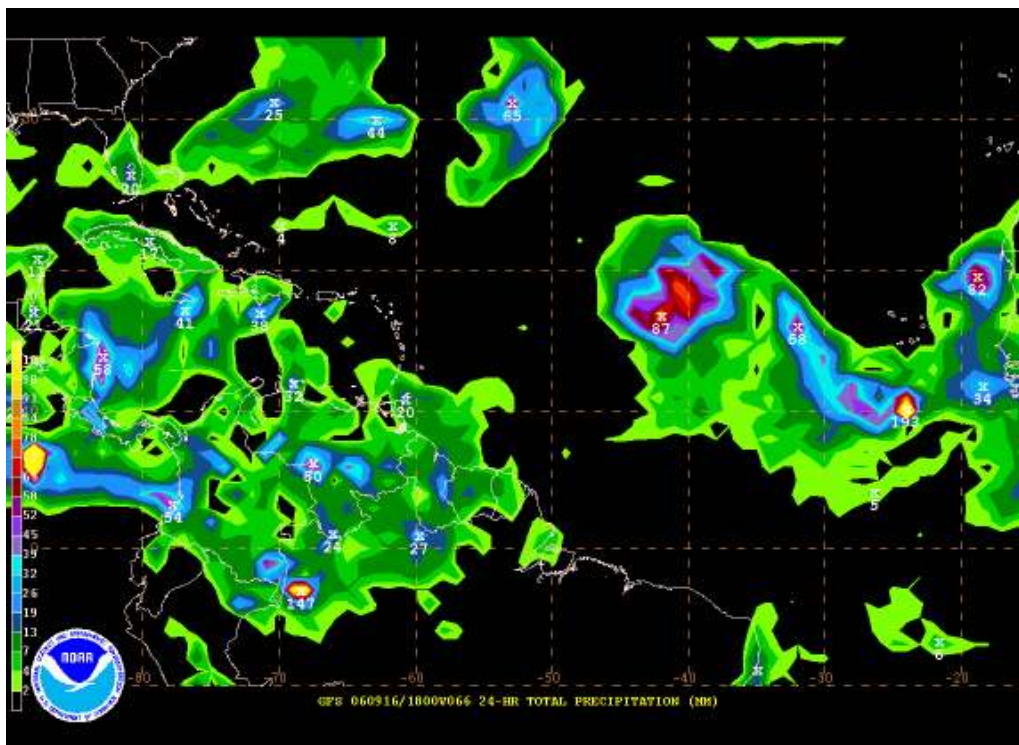
Total Precipitation over West Africa (NOAA/NCEP/GFS Model)
Valid September 14th to 15th at 1800UTC



24-H Total Precipitation (mm)
September 15th at 1800UTC
GFS Model



24-H Total Precipitation (mm)
September 16th at 1800UTC
GFS Model



24-H Total Precipitation (mm)
September 17th at 1800UTC
GFS Model

